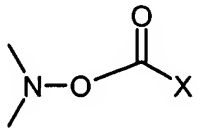
In the Claims

1. (currently amended) A flame retardant composition which comprises

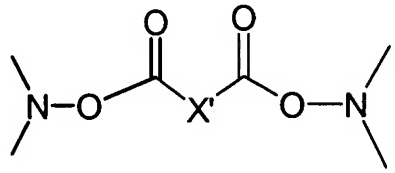
(a) a thermoplastic polymeric substrate[[,]]and

(b) a mixture of

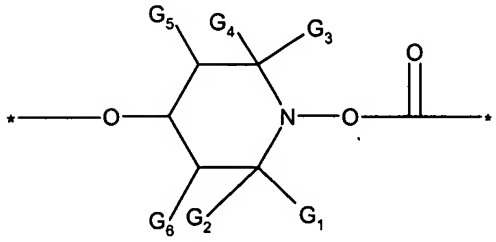
(i) a hydroxylamine ester having a structural element of formula (I) or formula (I') or a polymeric hydroxylamine ester having a repetitive structural unit of formula (II) or (II')



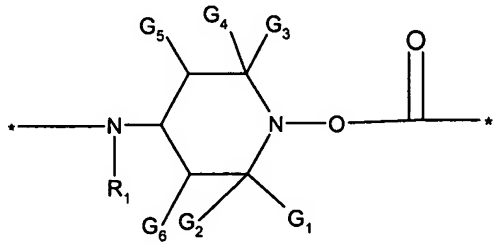
(I)[[,]]



(I')



(II)[[,]]



(II')

wherein

X is hydrogen, C_1-C_{36}alkyl, C_2-C_{36}alkenyl, C_2-C_{18}alkinyl, C_6-C_{10}aryl, -O-C_1-C_{18}alkyl, -O-C_6-C_{10}aryl, -NH-C_1-C_{18}alkyl, -NH-C_6-C_{10}aryl, -N(C_1-C_6alkyl)$_2$;

X' is a direct bond or C_1-C_{36}alkylene, C_2-C_{36}alkenylene, C_2-C_{36}alkinylene, -(C_1-C_6alkylene)-phenylene-(C_1-C_6alkylene)- or a group from a dimer acid;

G_1, G_2, G_3 and G_4 are independently alkyl of 1 to 4 carbon atoms, or G_1 and G_2 together and G_3 and G_4 together, or G_1 and G_2 together or G_3 and G_4 together are pentamethylene;

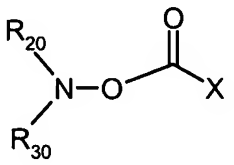
G_5 and G_6 are independently hydrogen or C_1-C_4 alkyl; and

R_1 is C_1-C_{12}alkyl, C_5-C_7cycloalkyl, C_7-C_9aralkyl, C_2-C_{18}alkanoyl, C_3-C_5alkenoyl or benzoyl;

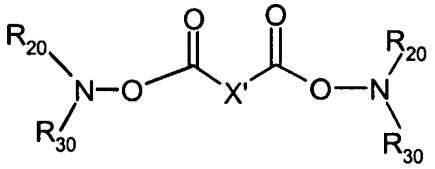
and

(ii) a flame retardant compound selected from the group consisting of halogenated, phosphorus, boron, silicon <u>or</u>~~and~~ antimony compounds, metal hydroxides, metal hydrates, metal oxides and mixtures thereof.

2. (currently amended) A composition according to claim **1** wherein the hydroxylamine ester is of formula (Ia) or (I'a)



(Ia)**[[,]]**



(I'a)

wherein

X is hydrogen, C_1-C_{36}alkyl, C_2-C_{36}alkenyl, C_2-C_{18}alkinyl, C_6-C_{10}aryl, -O-C_1-C_{18}alkyl, -O-C_6-C_{10}aryl, -NH-C_1-C_{18}alkyl, -NH-C_6-C_{10}aryl, -N(C_1-C_6alkyl)$_2$;

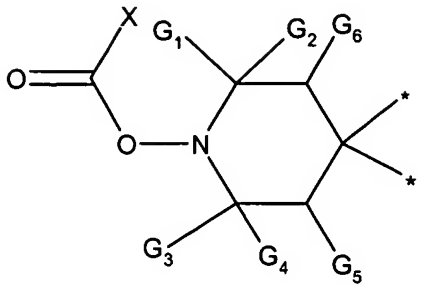
X' is a direct bond or C_1-C_{36}alkylene, C_3-C_{36}alkenylene, C_3-C_{36}alkinylene, -(C_1-C_6alkylene)-phenyl-(C_1-C_6alkylene) or a group from a dimer acid;

R_{20} and R_{30} independently are unsubstituted C_1-C_{18}alkyl, C_2-C_{18}alkenyl, C_2-C_{18}alkinyl or with halogen, CN, NO_2 or -$COOR_{40}$ substituted or with O or NR_{40} interrupted C_1-C_{18}alkyl, C_2-C_{18}alkenyl or C_2-C_{18}alkinyl; <u>and</u>

R_{40} is H, phenyl or C_1-C_{18}alkyl; or

R_{20} and R_{30} together with the nitrogen atom to which they are bound form a 5 or 6 membered ring which may be interrupted by a nitrogen or oxygen atom and which may be substituted by one or more C_1-C_6alkyl groups, carboxyl groups, C_1-C_{18}alkoxy groups**[[,]]** <u>or</u> C_1-C_{18}alkanoyloxy groups.

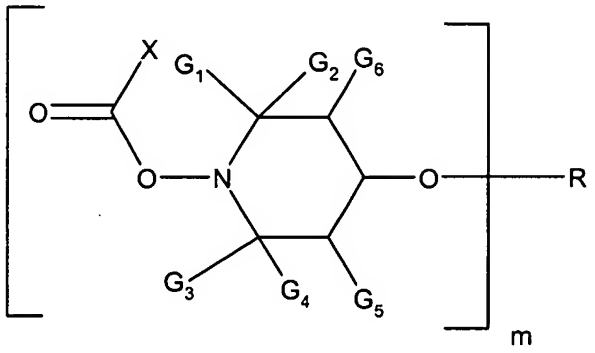
3. (original) A composition according to claim **1** wherein the structural element of formula (I) is of formula (Ib)



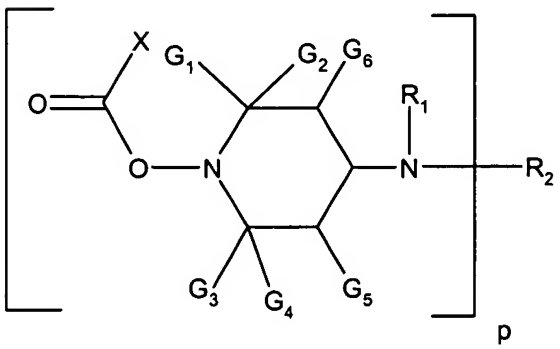
(Ib)

wherein * denotes a bond and the other substituents are as defined in claim **1**.

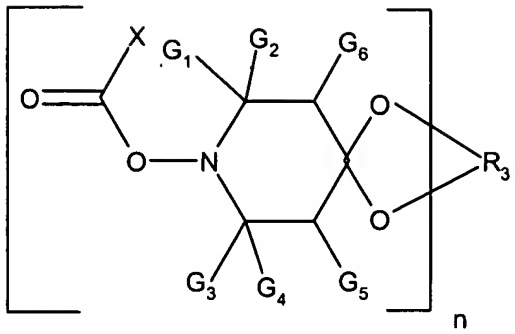
4. (currently amended) A composition according to claim **3** wherein the hydroxylamine ester is of formula A, B or C**[[.]]**



(A)



(B)



(C)

wherein

G_1, G_2, G_3 and G_4 are methyl or G_1 and G_3 are methyl and G_2 and G_4 are ethyl or G_1 and G_2 are methyl and G_3 and G_4 are ethyl;

G_5 and G_6 are independently hydrogen or methyl;

m is 1;

R is hydrogen, C_1-C_{18}alkyl which is uninterrupted or C_2-C_{18}alkyl which is interrupted by one or more oxygen atoms, cyanoethyl, benzoyl, glycidyl, a monovalent radical of an aliphatic carboxylic acid having 2 to 18 carbon atoms, of a cycloaliphatic carboxylic acid having 7 to 15 carbon atoms, or an α,β-unsaturated carboxylic acid having 3 to 5 carbon atoms or of an aromatic carboxylic acid having 7 to 15 carbon atoms, where each carboxylic acid can be substituted in the aliphatic, cycloaliphatic or aromatic moiety by 1 to 3 -$COOZ_{12}$ groups, in which Z_{12} is H, C_1-C_{20}alkyl, C_3-C_{12}alkenyl, C_5-C_7cycloalkyl, phenyl or benzyl; or

R is a monovalent radical of a carbamic acid or phosphorus-containing acid or a monovalent silyl radical;

p is 1;

R_1 is C_1-C_{12}alkyl, C_5-C_7cycloalkyl, C_7-C_8aralkyl, C_2-C_{18}alkanoyl, C_3-C_5alkenoyl or benzoyl;

R_2 is C_1-C_{18}alkyl, C_5-C_7cycloalkyl, C_2-C_8alkenyl unsubstituted or substituted by a cyano, carbonyl or carbamide group, or is glycidyl, a group of the formula -$CH_2CH(OH)$-Z or of the formula -CO-Z- or -CONH-Z wherein Z is hydrogen, methyl or phenyl;

n is 1,

R_3 is C_2-C_8alkylene or hydroxyalkylene or C_4-C_{36}acyloxyalkylene

and

X is hydrogen, C_1-C_{36}alkyl or C_6-C_{10}aryl.

5. (currently amended) A composition according to claim **4** wherein the hydroxylamine ester is of formula A or C;

G_1, G_2, G_3 and G_4 are methyl or G_1 and G_3 are methyl and G_2 and G_4 are ethyl;

G_5 and G_6 are independently hydrogen or methyl;

m is 1;

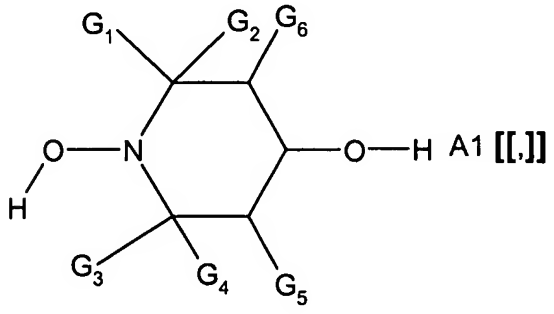
R is hydrogen, C_1-C_{18}alkyl, a monovalent radical of an aliphatic carboxylic acid having 2 to 18 carbon atoms, of a cycloaliphatic carboxylic acid having 7 to 15 carbon atoms, or an α,β-unsaturated carboxylic acid having 3 to 5 carbon atoms or of an aromatic carboxylic acid having 7 to 15 carbon atoms;

n is 1;

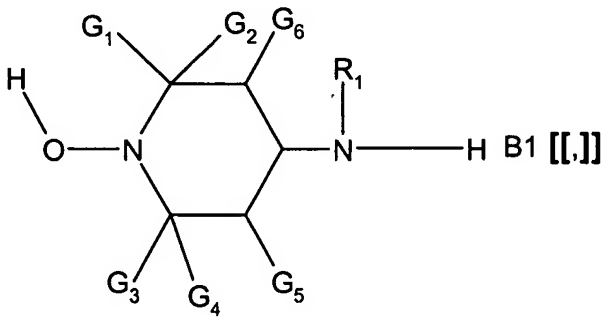
R_3 is C_2-C_8alkylene or hydroxyalkylene or C_4-C_{36}acyloxyalkylene and

X is hydrogen, C_1-C_{36}alkyl or C_6-C_{10}aryl.

6. (currently amended) A composition according to claim **1** wherein the hydroxylamineester is an oligomer or polymer obtained~~able~~ by reacting a dicarboxylic acid or a dicarboxylic acid derivative with a compound of formula A1 or B1 or by reacting a diisocyanate with a compound of formula A1



A1 **[[,]]**



B1 **[[,]]**

wherein the substituents G_1, G_2, G_3, G_4, G_5, G_6 and R_1 are as defined in claim **1[[6]]**.

7. (original) A composition according to claim **1** wherein the hydroxylamine ester is present in an amount of from 0.1 to 15 weight-% based on the weight of the polymer.

8. (currently amended) A composition according to claim **1** wherein the polymer substrate is a resin selected from the group ~~of resins~~ consisting of the polyolefins, the thermoplastic olefins**[[,]]** and styrenic polymers or~~and~~ copolymers.

9. (currently amended) A composition according to claim **8** wherein the polymer substrate is polypropylene, polyethylene, thermoplastic olefin (TPO), polystrene, ABS, high impact polystyrene, expandable polystyrene (EPS) or~~and~~ extrusion foamed polystyrene.

10. (currently amended) A composition according to claim **1** wherein the flame retardant compound ~~component (ii)~~ is selected from the group consisting of

tetraphenyl resorcinol diphosphite, ~~(FYROLFLEX® RDP)~~
chloroalkyl phosphate esters, ~~(ANTIBLAZE® AB-100 or FYROL® FR-2)~~
polybrominated diphenyl oxide, ~~(DE-60F)~~
decabromodiphenyl oxide ~~(DBDOP)~~,
antimony trioxide (Sb_2O_3),
antimony pentoxide (Sb_2O_5),
tris[3-bromo-2,2-(bromomethyl)propyl] phosphate ~~(PB-370®)~~,
triphenyl phosphate,
bis(2,3-dibromopropyl ether) of bisphenol A ~~(PE68)~~,
ammonium polyphosphate (APP) ~~or (HOSTAFLAM® AP750)~~,
resorcinol diphosphate oligomer (RDP),
brominated epoxy resin,
tetrabromobisphenol A-bis-(allyl ether),
hexabromocyclododecane,
dibromocyclohexane,
tribromophenol-cyanurate, ~~(Dead Sea® FR-245)~~
ethylene-bis(tetrabromophthalimide) ~~(BT93)~~,
bis(hexachlorocyclopentadieno)cyclooctane ~~(DECLORANE PLUS®)~~,
calcium sulfate,

chlorinated paraffins,
magnesium carbonate,
melamine phosphates,
melamine pyrophosphates,
molybdenum trioxide,
zinc oxide,
1,2-bis(tribromophenoxy)ethane ~~(FF680)~~,
tetrabromo-bisphenol A ~~(SAYTEX® RB100)~~,
Saytex® BC-56HS, ~~(Albemarle)~~
magnesium hydroxide,
alumina trihydrate,
zinc borate, ~~and~~
ethylenediamine diphosphate (EDAP)**[[.]]** and
Oligomeric diisopropyl benzene.

11. (currently amended) A composition according to claim **10** wherein the flame retardant compound ~~(ii)~~ is tris[3-bromo-2,2-(bromomethyl)propyl] phosphate ~~(PB370)~~, hexabromo-cyclododecane, tetrabromobisphenol A-bis-(allyl ether), dibromocyclohexane or ~~and~~ Saytex BC-56HS ~~(Albemarle)~~.

12. (currently amended) A composition according to claim **1** wherein the flame retardant compound ~~component (ii)~~ is present in an amount of from 0.1 to 30 weight-% based on the weight of the polymer.

13. (original) A composition according to claim **1** wherein the ratio by weight between component (i) and (ii) is from 10:1 to 1:100.

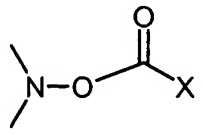
14. (original) A composition according to claim **1**, which additionally contains an organic peroxide and/or another radical generator.

15. (original) A composition according to claim **1** which additionally contains a further additive selected from the group consisting of a UV absorber, a sterically hindered amine, a phenolic antioxidant, a phosphite or phosphonite and a benzofuranone or an indolinone.

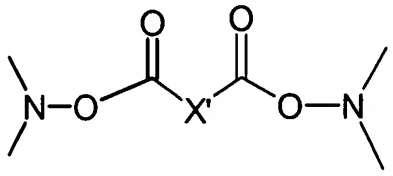
16. (currently amended) A method of making a thermoplastic polymer flame retarding by incorporating into the thermoplastic polymer

a mixture of

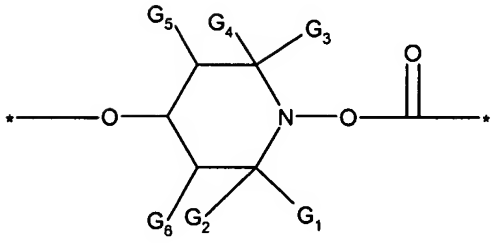
(i) a hydroxylamine ester having a structural element of formula (I) or formula (I') or ~~with~~ a polymeric hydroxylamine ester having a repetitive structural unit of formula (II) or (II')



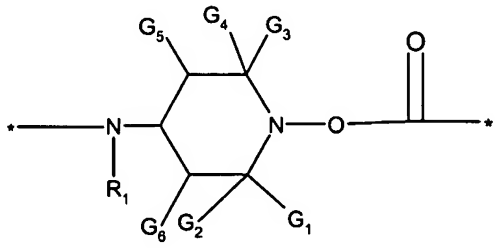
(I)[[,]]



(I')



(II)[[,]]



(II')

wherein

X is hydrogen, C_1-C_{36}alkyl, C_2-C_{36}alkenyl, C_2-C_{18}alkinyl, C_6-C_{10}aryl, -O-C_1-C_{18}alkyl, -O-C_6-C_{10}aryl, -NH-C_1-C_{18}alkyl, -NH-C_6-C_{10}aryl, -N(C_1-C_6alkyl)$_2$;

X' is a direct bond or C_1-C_{36}alkylene, C_2-C_{36}alkenylene, C_2-C_{36}alkinylene, -(C_1-C_6alkylene)-phenylene-(C_1-C_6alkylene)- or a group from a dimer acid;

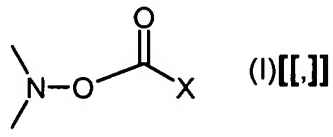
G_1, G_2, G_3 and G_4 are independently alkyl of 1 to 4 carbon atoms, or G_1 and G_2 together and G_3 and G_4 together, or G_1 and G_2 together or G_3 and G_4 together are pentamethylene;
G_5 and G_6 are independently hydrogen or C_1-C_4 alkyl; and
R_1 is C_1-C_{12}alkyl, C_5-C_7cycloalkyl, C_7-C_8aralkyl, C_2-C_{18}alkanoyl, C_3-C_5alkenoyl or benzoyl; and

(ii) a flame retardant compound selected from the group consisting of halogenated, phosphorus, boron, silicon or ~~and~~ antimony compounds, metal hydroxides, metal hydrates, metal oxides and mixtures thereof.

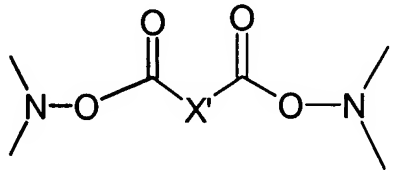
17. (currently amended) A **[[**F**]]**flame retardant mixture comprising

(i) a hydroxylamine ester having a structural element of formula (I) or formula (I') or with a polymeric hydroxylamine ester having a repetitive structural unit of formula (II) or (II')

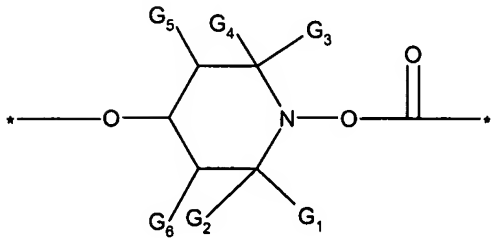
(ii)



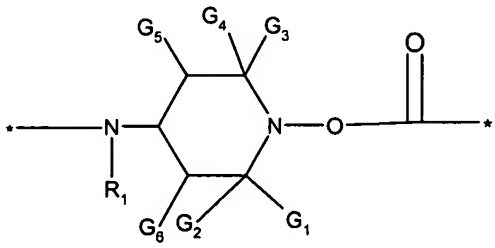
(I)**[[,]]**



(I')



(II)**[[,]]**



(II')

wherein

X is hydrogen, C_1-C_{36}alkyl, C_2-C_{36}alkenyl, C_2-C_{18}alkinyl, C_6-C_{10}aryl, -O-C_1-C_{18}alkyl, -O-C_6-C_{10}aryl, -NH-C_1-C_{18}alkyl, -NH-C_6-C_{10}aryl, -N(C_1-C_6alkyl)$_2$;

X' is a direct bond or C_1-C_{36}alkylene, C_2-C_{36}alkenylene, C_2-C_{36}alkinylene, -(C_1-C_6alkylene)-phenylene-(C_1-C_6alkylene) or a group from a dimer acid;

G_1, G_2, G_3 and G_4 are independently alkyl of 1 to 4 carbon atoms, or G_1 and G_2 together and G_3 and G_4 together, or G_1 and G_2 together or G_3 and G_4 together are pentamethylene;
G_5 and G_6 are independently hydrogen or C_1-C_4 alkyl; and
R_1 is C_1-C_{12}alkyl, C_5-C_7cycloalkyl, C_7-C_8aralkyl, C_2-C_{18}alkanoyl, C_3-C_5alkenoyl or benzoyl; and

(ii) a flame retardant compound selected from the group consisting of halogenated, phosphorus, boron, silicon or ~~and~~ antimony compounds, metal hydroxides, metal hydrates, metal oxides and mixtures thereof.

18. (canceled)

19. (canceled)